

10/747,730

In the Claims:

1.-7. cancelled.

8. (currently amended) A ball bearing comprising an inner race having an outer peripheral surface formed with an inner-race track, an outer race having an inner peripheral surface formed with an outer-race track, a plurality of balls rollably provided between the inner-race track and the outer-race track, a retainer for rollably holding the balls, the retainer having a surface on one axial side thereof and inner and outer peripheral surfaces, and a seal plate opposing the surface on the one axial side of the retainer and having a surface on one axial side thereof and an outer peripheral edge attached to the inner peripheral surface of the outer race at an axial end of the outer race and an inner peripheral edge in sliding contact with or close to the outer peripheral surface at an axial end of the inner race, the outer peripheral surface of the inner race having a radially inner shoulder portion adjacent the axially outer side of the inner-race track and having a diameter larger than the inner-race track so as to face the inner peripheral surface of the retainer such that a radially inner annular gap with a radial size is formed between the radially inner shoulder portion and the inner peripheral surface of the retainer, an annular gap being formed between the surface on the axial side of the retainer and the surface on the one axial side of the seal plate, the inner peripheral surface of the outer race having a radially outer shoulder portion adjacent the axially outer side of the outer-race track and having a diameter smaller than the outer-race track so as to face the outer peripheral surface of the retainer such that a radially outer annular gap with a radial size is formed between the radially outer shoulder portion and the outer peripheral surface of the retainer, the annular gap between the surface on the one axial side of the retainer and the surface on the one axial side of the seal plate having a size at its inner periphery and an axial size at its radially middle portion, wherein an inner peripheral surface of the outer peripheral edge of the seal plate is inclined radially outward in the axially inner direction, and wherein provided that L_1 is the radial size of the radially inner annular gap, that the L_2 is the size of the annular gap at the inner periphery thereof, that L_3 is the axial size at radially middle portion of the annular gap, that L_4 is the radial size of the radially outer annular gap, and that D_4 is the diameter of the balls, the following relations are satisfied;

$$L_1 \leq L_2 \leq L_3,$$

$$1.5L_1 \leq L_3 \text{ or } 0.09D_4 \leq L_3,$$

$$L_1 \leq L_4, \text{ and}$$

$$1.5L_1 \text{ is substantially equal to } 0.09D_4.$$

9.-11. (Withdrawn)